

~~SECRET~~

25X1

PHOTOGRAPHIC INTERPRETATION REPORT



SELECTED
MAJOR COMMUNICATIONS
FACILITIES
NORTH VIETNAM

NPIC-R-42/69
MAY 1969

GROUP 1: EXCLUDED FROM
AUTOMATIC DOWNGRADING
AND DECLASSIFICATION

~~SECRET~~

25X1

Declass Review by NIMA / DoD

WARNING

This document contains information affecting the national defense of the United States, within the meaning of Title 18, sections 793 and 794, of the U.S. Code, as amended. Its transmission or revelation of its contents to or receipt by an unauthorized person is prohibited by law.

SECRET

NPIC/R-42/69

25X1

PHOTOGRAPHIC INTERPRETATION REPORT

SELECTED MAJOR COMMUNICATIONS FACILITIES NORTH VIETNAM

MAY 1969

NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER

SECRET

25X1

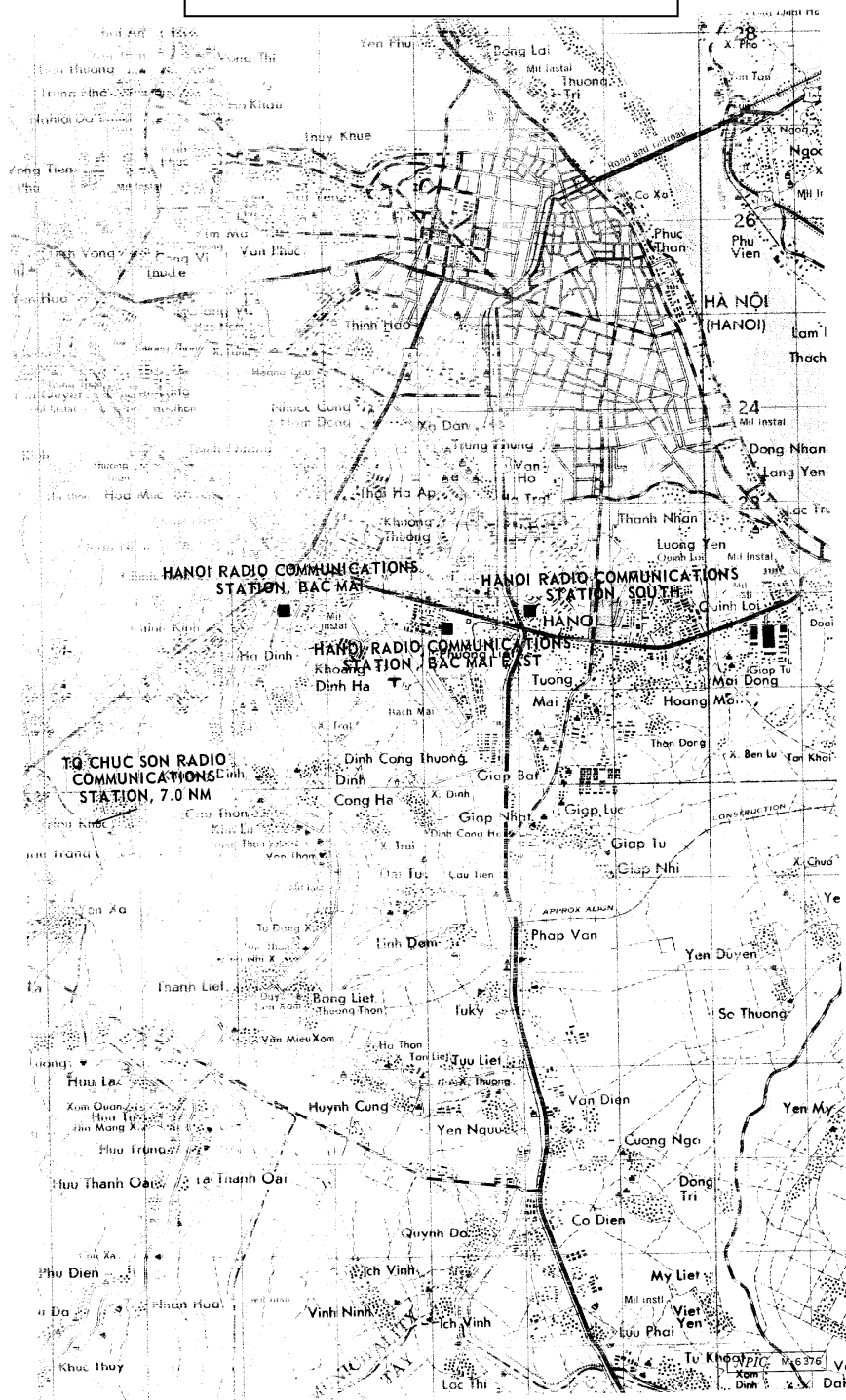


FIGURE 1. GENERAL LOCATION MAP.

SECRET

INTRODUCTION

This report is a continuation of NPIC/R-134/68, Selected Major Communications Facilities in North Vietnam, Jan 69, which contained descriptions of six facilities. Of the four additional installations (Figure 1) which are treated in detail in this report, two are located at Hanoi/Bac Mai Airfield and are associated with the air defense headquarters located there. Another facility, which is also located near Bac Mai Airfield, probably supports insurgency operations in Southeast Asia. There are no indications as to the function of the fourth facility included in this report.

<u>NAME</u>	<u>GEO. COORDS.</u>	<u>PAGE NO.</u>
Hanoi Radio Communications Station South	20-59-45N 105-50-57E	3
Chuc Son Radio Communications Station	20-56-24N 105-41-12E	7
Hanoi Radio Communications Station, Bac Mai	20-59-52N 105-49-28E	11
Hanoi Radio Communications Station, Bac Mai East	20-59-46N 105-50-25E	15

25X1A

~~SECRET~~

25X1

HANOI RADIO
COMMUNICATIONS STATION,
SOUTH

25X1A

- 2 -

~~SECRET~~

25X1

SECRET

NPIC/R-42/69

25X1

[Redacted]

INSTALLATION OR ACTIVITY NAME

Hanoi Radio Communications Station South

COUNTRY

VN

UTM COORDINATES

WJ881218

GEOGRAPHIC COORDINATES

20-59-45N 105-50-57E

COMIREX NO.

None

MAP REFERENCE

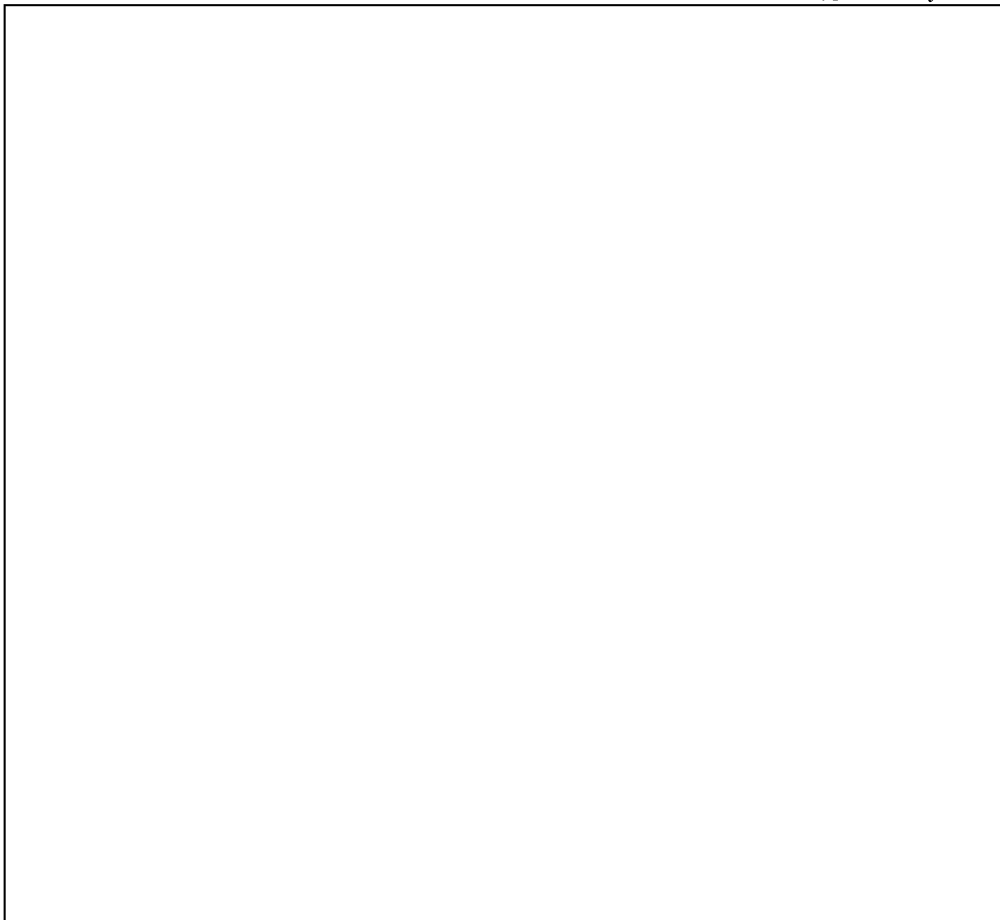
AMS. Series L7014, Sheet 6150 I, 1st ed, 1965, scale 1:50,000 (Unclassified)

NEGATION DATE (if required)

None

The Hanoi Radio Communications Station South is located in Hanoi, 1.8 nautical miles (nm) south-southeast of the railroad classification yards near the intersection of Pho Nga Tu So (Route 606) and Pho Dong Tam (Route 1A).

The antenna farm contains four parallel pairs of horizontal dipole antennas, seven additional horizontal dipoles, and one whip antenna. Antennas 16 through 23 provide the capability of transmitting/receiving signals from all directions; however, most of the antennas are oriented to provide communications toward Southern Laos, Cambodia, and South Vietnam. These antennas would also provide communications to southern China. All antennas except two are fed in a conventional manner. Two antennas, 18 and 19, have short feed lines or tuning stubs which do not connect with either control building. These arrays may be utilized as reflectors, thus making antennas 16 and 17 unidirectional (toward the south-southeast) instead of bidirectional. This type of array



25X1

SECRET

[Redacted]

25X1

SECRET

25X1



FIGURE 3. HANOI RADIO COMMUNICATIONS STATION SOUTH, HANOI, NORTH VIETNAM.

would further substantiate the reported probability that this station is used to support insurgency operations in Southeast Asia 1/.

The transmitters/receivers for the station are located in two control buildings, one of which is protected by earth-banked blast walls. The radio station also contains a protected generator building, seven support buildings, and two small earth-covered bunkers.

This station was reported as a radiotelegraph station. Most of the buildings had been replaced (with the exception of the L-shaped control building). The earth-banked concrete walls were subsequently constructed around the generator building and one of the control buildings.

Electric power is probably provided from a nearby substation, with emergency power supplied by a diesel generator within the generator building.

- 4 -

SECRET

25X1

SECRET

25X1

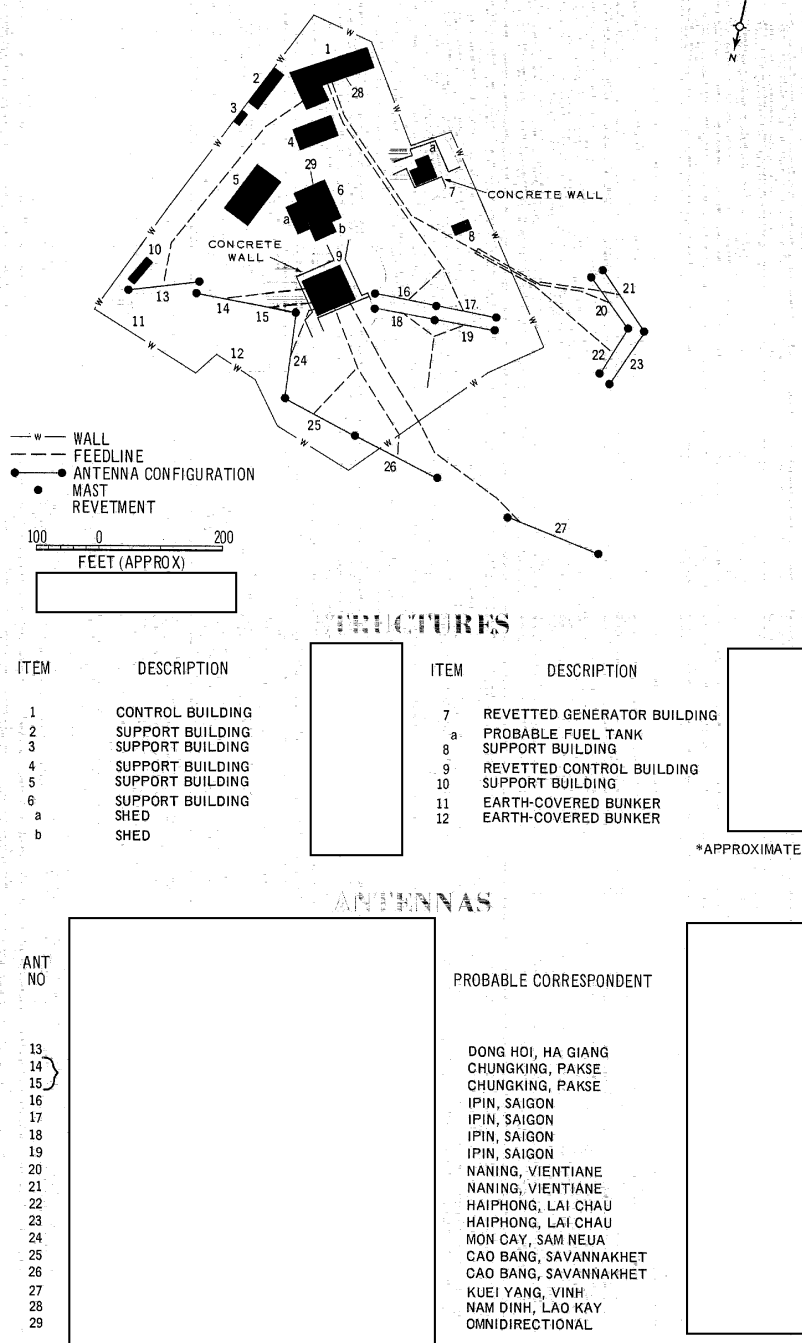


FIGURE 4. HANOI RADIO COMMUNICATIONS STATION SOUTH, HANOI, NORTH VIETNAM.

SECRET

25X1

SECRET

25X1

CHUC SON RADIO
COMMUNICATIONS STATION

25X1A

- 6 -

SECRET

25X1

~~SECRET~~



25X1

INSTALLATION OR ACTIVITY NAME		COUNTRY
Chuc Son Radio Communications Station		VN
UTM COORDINATES	GEOGRAPHIC COORDINATES	
WJ714155	20-56-24N 105-41-12E	
MAP REFERENCE		

25X1A

AMS. Series L7014, Sheet 6150 IV, 1st ed, 1965, scale 1:50,000 (Unclassified)

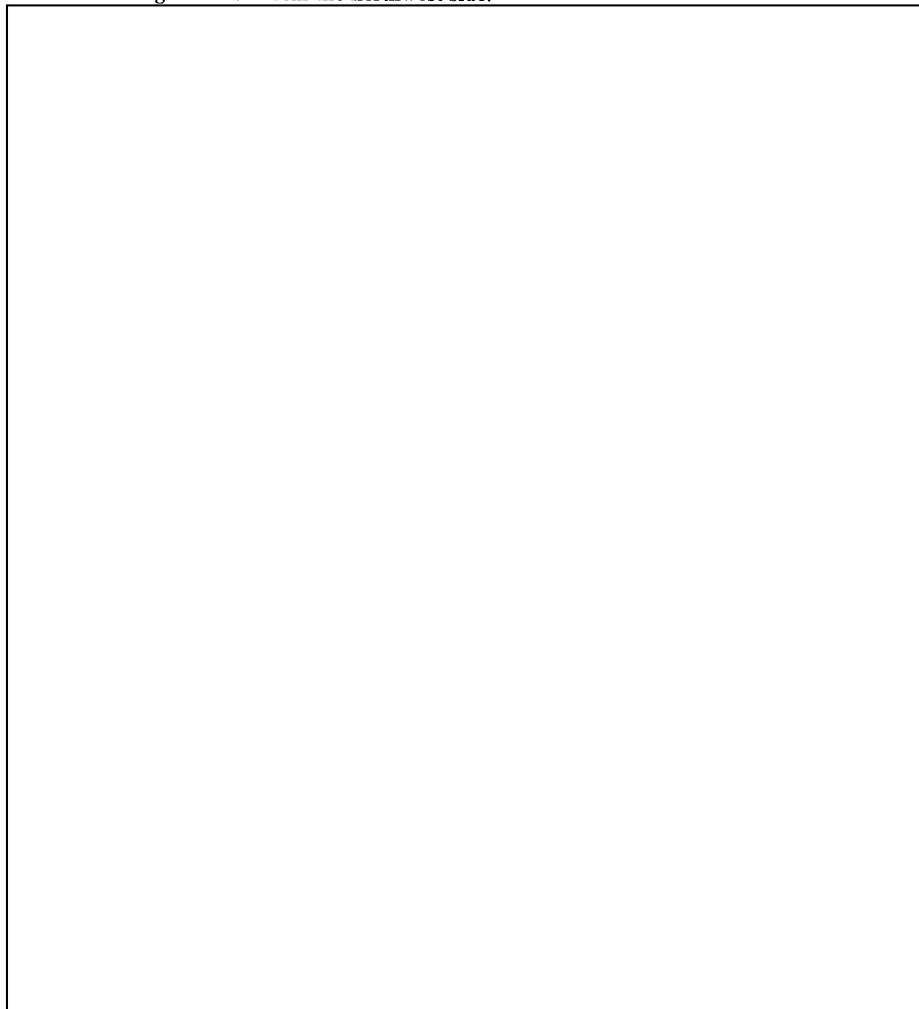
	NEGATION DATE (if required)
	None

25X1D

This station is located 10 nautical miles (nm) southwest of Hanoi between the villages of Xom Quan Lieu and Xom Dong. It is served by dirt trails from Route 6 which is 1 nm south.

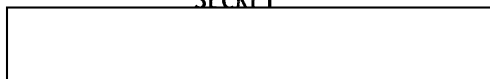
The antenna farm contains eight horizontal dipole antennas. These antennas are oriented for communications throughout North Vietnam and neighboring countries. All antenna feed lines lead to the control building. The feeds from half the antennas enter on the southeast side of the building while the feeds from the other antennas pass above the building and enter from the northwest side.

25X1D



- 7 -

~~SECRET~~



25X1

SECRET

25X1



FIGURE 6. CHUC SON RADIO COMMUNICATIONS STATION, HANOI, NORTH VIETNAM.

- 8 -

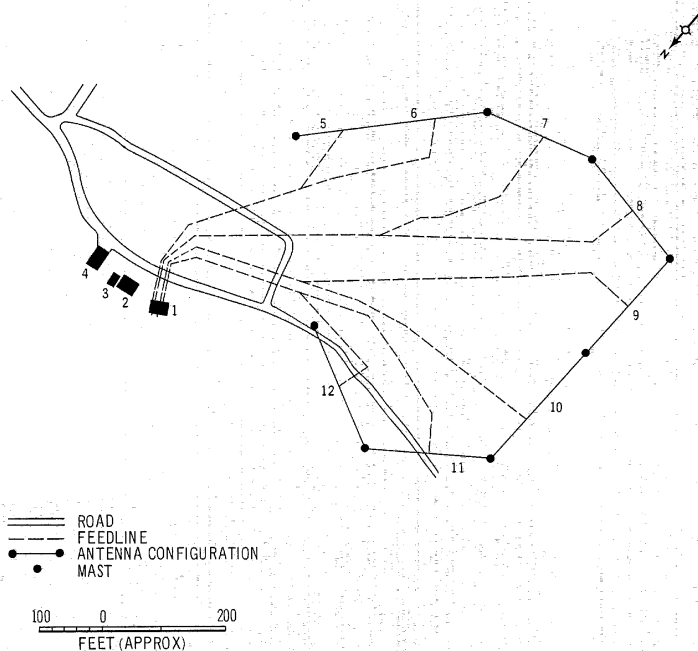
SECRET

25X1

25X1

SECRET

25X1



STRUCTURES

ITEM	DESCRIPTION
1	RETTED CONTROL BUILDING
2	SUPPORT BUILDING
3	SHED
4	RETTED SUPPORT BUILDING

TABLE

ANT NO	PROBABLE CORRESPONDENT
5	NAM DINH/LAO KAY
6	NAM DINH/LAO KAY
7	DONG HOI/HA GIANG
8	VINH/CAO BANG
9	HAIPHONG/NA SAN
10	HAIPHONG/NA SAN
11	TONKIN GULF/KUN MING
12	LANG SON/NORTHEAST THAILAND INSURGENCY AREA

FIGURE 7. CHUC SON RADIO COMMUNICATIONS STATION, HANOI, NORTH VIETNAM.

- 9 -

SECRET

25X1

~~SECRET~~

NPIC/R-42/69

25X1

HANOI RADIO
COMMUNICATIONS STATION,
BAC MAI

25X1A

- 10 -

~~SECRET~~

25X1

SECRET

NPIC/R-42/69

25X1

INSTALLATION OR ACTIVITY NAME		COUNTRY
Hanoi Radio Communications Station, Bac Mai		VN
UTM COORDINATES	GEOGRAPHIC COORDINATES	
WJ856219	20-59-52N 105-49-28E	
MAP REFERENCE		
AMS. Series L7014, Sheet 6150 I, 1st ed, 1965, scale 1:50,000 (Unclassified)		
		NEGATION DATE (if required)
		None

25X1A

25X1D

Hanoi Radio Communications Station, Bac Mai, is located 0.8 nautical miles (nm) northwest of Hanoi/Bac Mai Airfield and is served by dirt roads leading to the airfield.

The antenna farm consists of 15 horizontal dipole antennas. Six of the antennas are oriented north/south, three are east/west, and the other six antennas are oriented in various directions. These horizontal dipole antennas would therefore provide high and medium frequency communications throughout southern China and Southeast Asia, with multiple frequency communications to the north/south and east/west. The entire antenna farm is apparently fed from a single control building.

25X1

SECRET

25X1

SECRET

NPIC/R-42/69

25X1

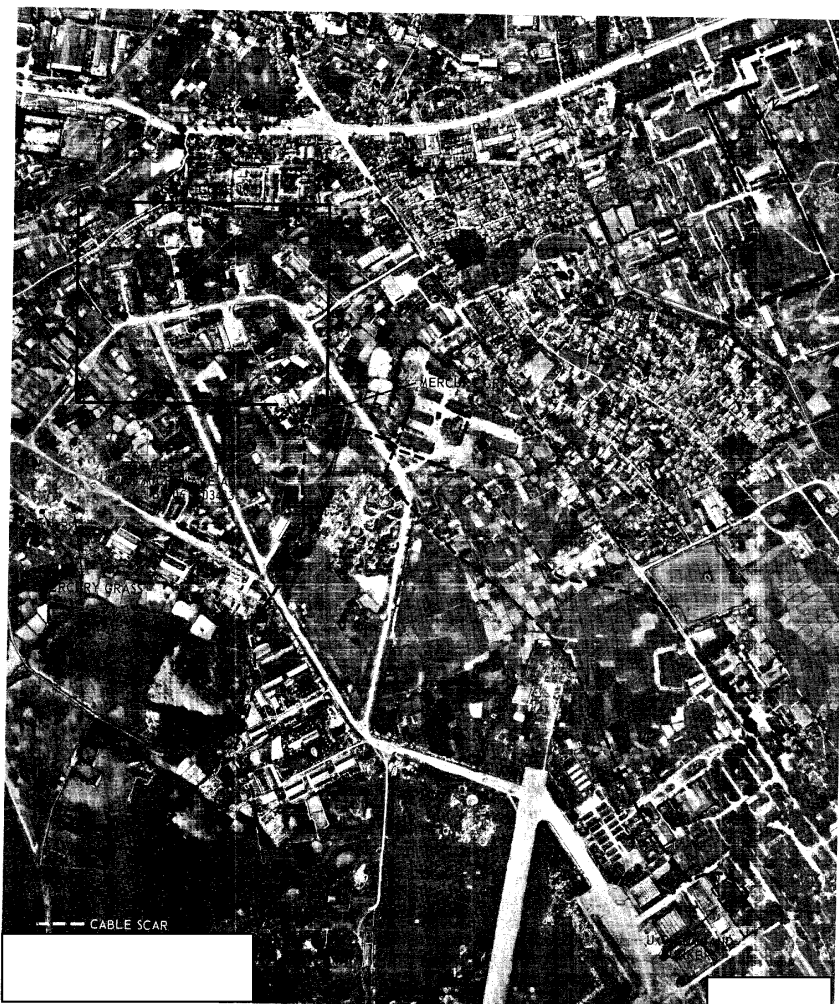


FIGURE 9. HANOI RADIO COMMUNICATIONS STATION, BAC MAI, HANOI, NORTH VIETNAM.

One control building, four barracks, and 12 support buildings are located within the area encompassed by the antenna farm; however, some of these buildings may be associated with other facilities at the airfield rather than the communications facility. [redacted] an R400 microwave installation was located near this radio station. [redacted] at least three MERCURY GRASS VHF antennas were seen in the same area. [redacted]

[redacted]

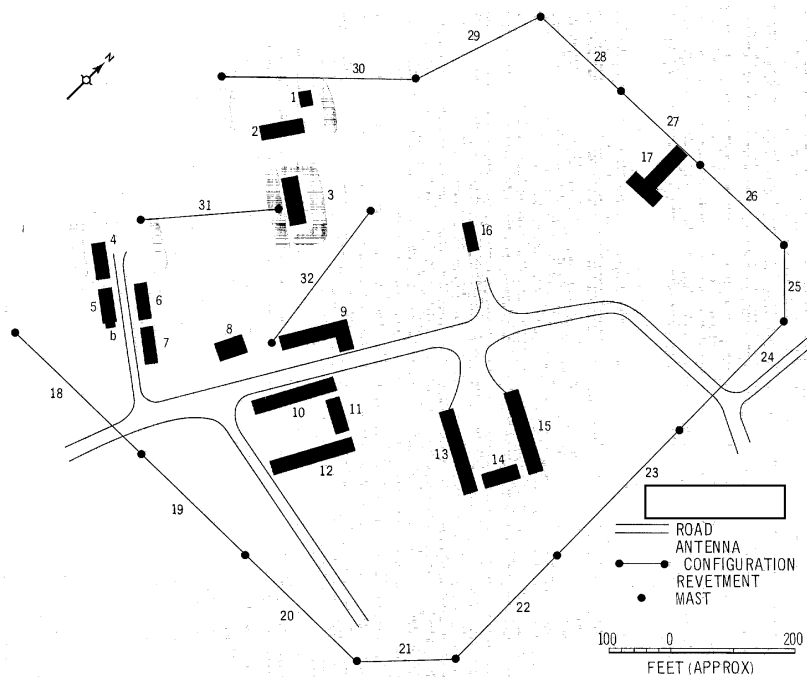
SECRET

25X1

SECRET

NPIC/R-42/69

25X1



25X1

STRUCTURES	
ITEM	DESCRIPTION
1	SUPPORT BUILDING
2	SUPPORT BUILDING
3	CONTROL BUILDING
4	SUPPORT BUILDING
5	SUPPORT BUILDING SHED
a	
b	
6	SUPPORT BUILDING
7	SUPPORT BUILDING
8	SUPPORT BUILDING
9	SUPPORT BUILDING SECTION
a	
b	
10	BARRACKS
11	SUPPORT BUILDING
12	BARRACKS
13	BARRACKS
14	SUPPORT BUILDING
15	BARRACKS
16	SUPPORT BUILDING
17	SUPPORT BUILDING SECTION
a	
b	
ANT NO	PROBABLE CORRESPONDENT
18	CAO BANG, THANH HOA
19	CAO BANG, THANH HOA
20	CAO BANG, THANH HOA
21	NAM DINH, LAO KAY
22	HAIPHONG, MUONG SING
23	HAIPHONG, MUONG SING
24	HAIPHONG, MUONG SING
25	LANG SON, VIENTIANE
26	CAO BANG, THANH HOA
27	CAO BANG, THANH HOA
28	CAO BANG, THANH HOA
29	HAINAN, LAI CHAU
30	NAM DINH, LAO KAY
31	NAM DINH, LAO KAY
32	MON CAY, HOA BINH

25X1D

25X1D

FIGURE 10. HANOI RADIO COMMUNICATIONS STATION, BAC MAI, HANOI, NORTH VIETNAM.

SECRET

25X1

~~SECRET~~

25X1

HANOI RADIO
COMMUNICATIONS STATION
BAC MAI EAST

- 14 -

~~SECRET~~

25X1

~~SECRET~~

25X1

INSTALLATION OR ACTIVITY NAME		COUNTRY
Hanoi Radio Communications Station, Bac Mai East		VN
UTM COORDINATES	GEOGRAPHIC COORDINATES	
WJ873217	20-59-46N 105-50-25E	
MAP REFERENCE		

25X1A

AMS. Series L7014, Sheet 6150 I, 1st ed, 1965, scale 1:50,000 (Unclassified)

	NEGATION DATE (if required)
	None

25X1D

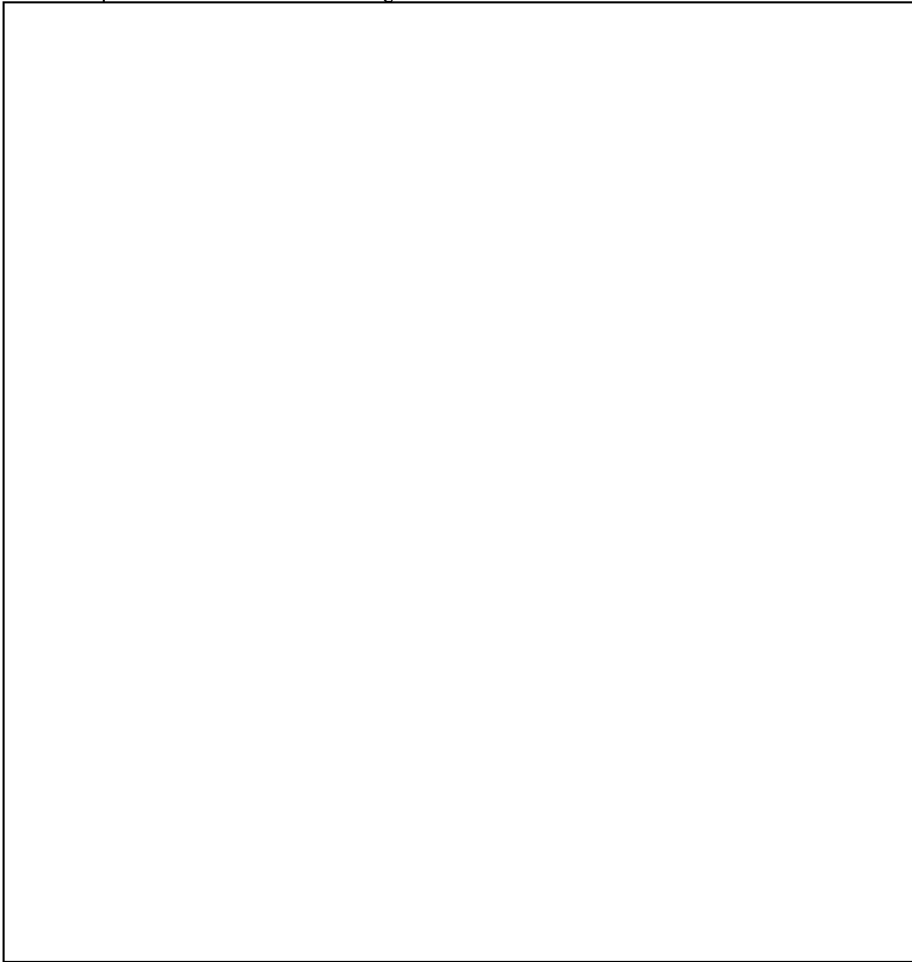
Hanoi Radio Communications Station, Bac Mai East is located adjacent to the hangar area at the Hanoi/Bac Mai Airfield.

The antenna farm consists of five horizontal dipole antennas, of which four are arranged in a square, and the other is oriented at an angle from one corner of the square.

25X1D

These antennas could provide communications throughout North Vietnam.

25X1D



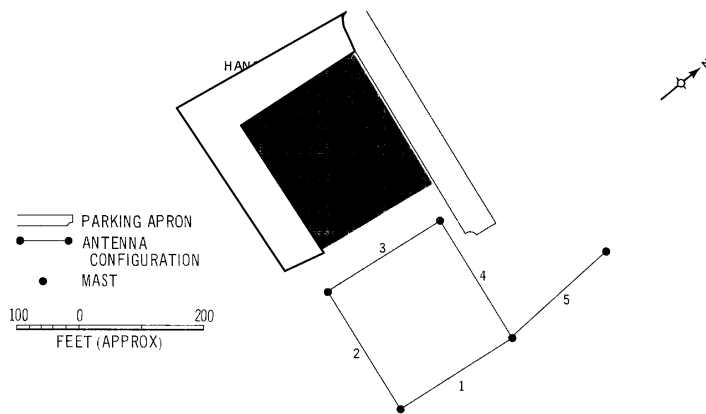
~~SECRET~~

25X1

SECRET



25X1



ANT NO	INITIAL GREAT CIRCLE BEARING (°)
1	105/285
2	15/195
3	105/285
4	15/195
5	85/265

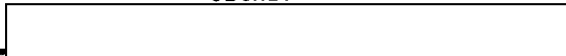
25X1D



25X1

FIGURE 12. HANOI RADIO COMMUNICATIONS STATION, BAC MAI EAST, HANOI, NORTH VIETNAM.

SECRET



25X1

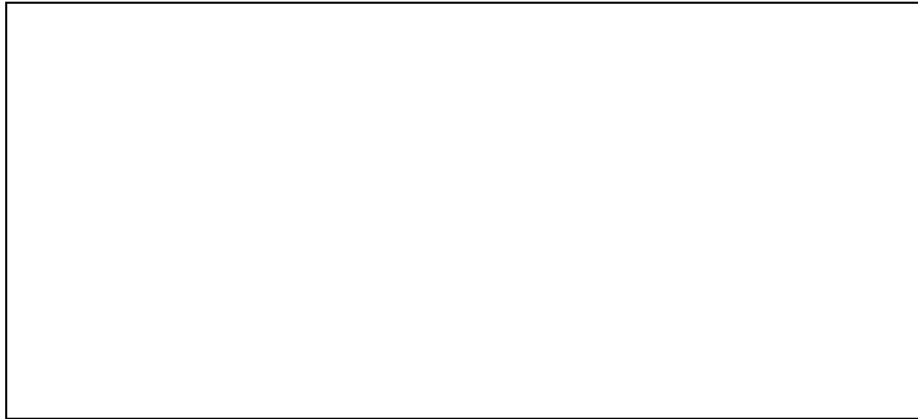
25X1D

SECRET

25X1

REFERENCES (Continued)

IMAGERY



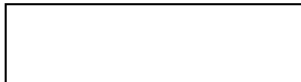
MAPS OR CHARTS

- AMS Series L7014, Scale 1:50,000, 1st ed, 1965 (UNCLASSIFIED)
AMS Series L501, Scale 1:250,000, 1st ed, 1965 (UNCLASSIFIED)

DOCUMENTS

1. NPIC. R-47/68, Photographic Interpretation Memorandum, Hanoi Area Communications Facilities Probably Used for Insurgency Operations, March 1968 (CONFIDENTIAL)
2. NPIC. R-267/66, Southeast Asia Activity Report, Communications Facilities, North Vietnam, February 1968 (SECRET)
3. NPIC. R-134/68, Selected Major Communications Facilities, North Vietnam, January 1969 (SECRET/)
4. US Department of Commerce. JPRS. 33,926, 27 January 1966, translation from Russian of Antennas and Masts, F. A. Savitskiy, Ministry of Communications, USSR, Moscow, 1962, pp. 70-88 (UNCLASSIFIED)
5. Jasik, Henry, ed. Antenna Engineering Handbook, McGraw-Hill Book Company, Inc., New York, 1961 (UNCLASSIFIED)
6. Laport, Edmund A. Radio Antenna Engineering, McGraw-Hill Book Company, Inc., New York, 1952 (UNCLASSIFIED)

REQUIREMENT



- 18 -

SECRET

25X1

25X1C